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Open Source Software Diffusion and Integration of Technology in Education
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Open Source Software

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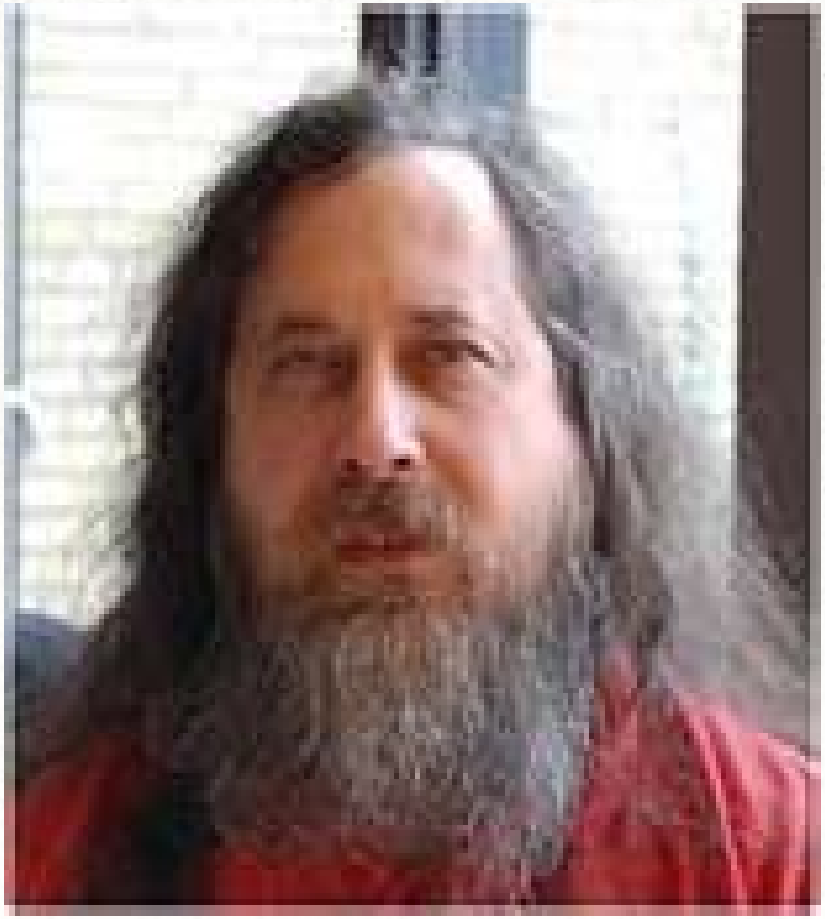
Abstract
The utilization of the computer and web technology has given rise to many innovations in the educational community.

Quote Accompanying Richard Stallman's software

“Share this code with your fellow users. Learn from it. Improve upon it. And when you're done, please give something back to the community” (Kidd, 2000).

Richard Stallman

Man With A Vision



Open Source Software

Open Source Software has addressed many of the technological difficulties of online learning. In this age of communication, the Open Source Software has enabled the world to connect and collaborate, through the circulation of the software.

Open Source Software

Who, What, Who, What?

Who would you expect to be (or who are) the innovators and early adopters in Open Source?

What strategies are the most persuasive in convincing them to adopt Open Source?

Who do you think would be (or who are) the laggards in terms of rejecting Open Source?

What strategies would be best to help move them toward adoption of Open Source?

Attributes:

Which combination of perceived attributes would be best for helping your innovation meet critical mass in your industry?

- Unrestricted distribution
- Source code distribution
- Modifications
- Author's source code integrity.
- No personal discrimination
- No restriction on application License distribution
- License must not be product-specific
- No restriction on other software - Technology neutrality

(Open Source Software in Education 2008)

Collaboration

Free Open Source Collaborative Tools

1. Access Grid; audio and video collaboration
2. Citadel; collaboration suite
3. OpenGroupware.org; software server for multiple clients
4. Spicebird; personal information manager
5. Audacity; audio recorder and editor
6. Synfig; animation builder
7. Cmap; concept mapping tool

A Plethora of other free open source applications that are used for collaboration.

Benefits:

- public collaboration behind each project.
- “created by tens of thousands of programmers all collaborating to create, and improve upon, a flawless website framework” (Dynamic Website Development and Design 2009).
- others can modify the Open Source Software to suit their individual person or group or school needs
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Benefits Continued - 2:

-free open source code

-detect and change or delete the attacker program, where as propriety software has hidden codes and spy-ware maybe hidden in the code without the knowledge of users and may require a fee by the proprietary vendor to rid the system of the spy-ware (The Linux Information Project 2004).

Benefits Continued - 3:

-can be used on older hardware and thereby this is beneficial to all and especially to lower income individuals and others in third world countries who get donations of older computers who can take advantage of these open source software resources

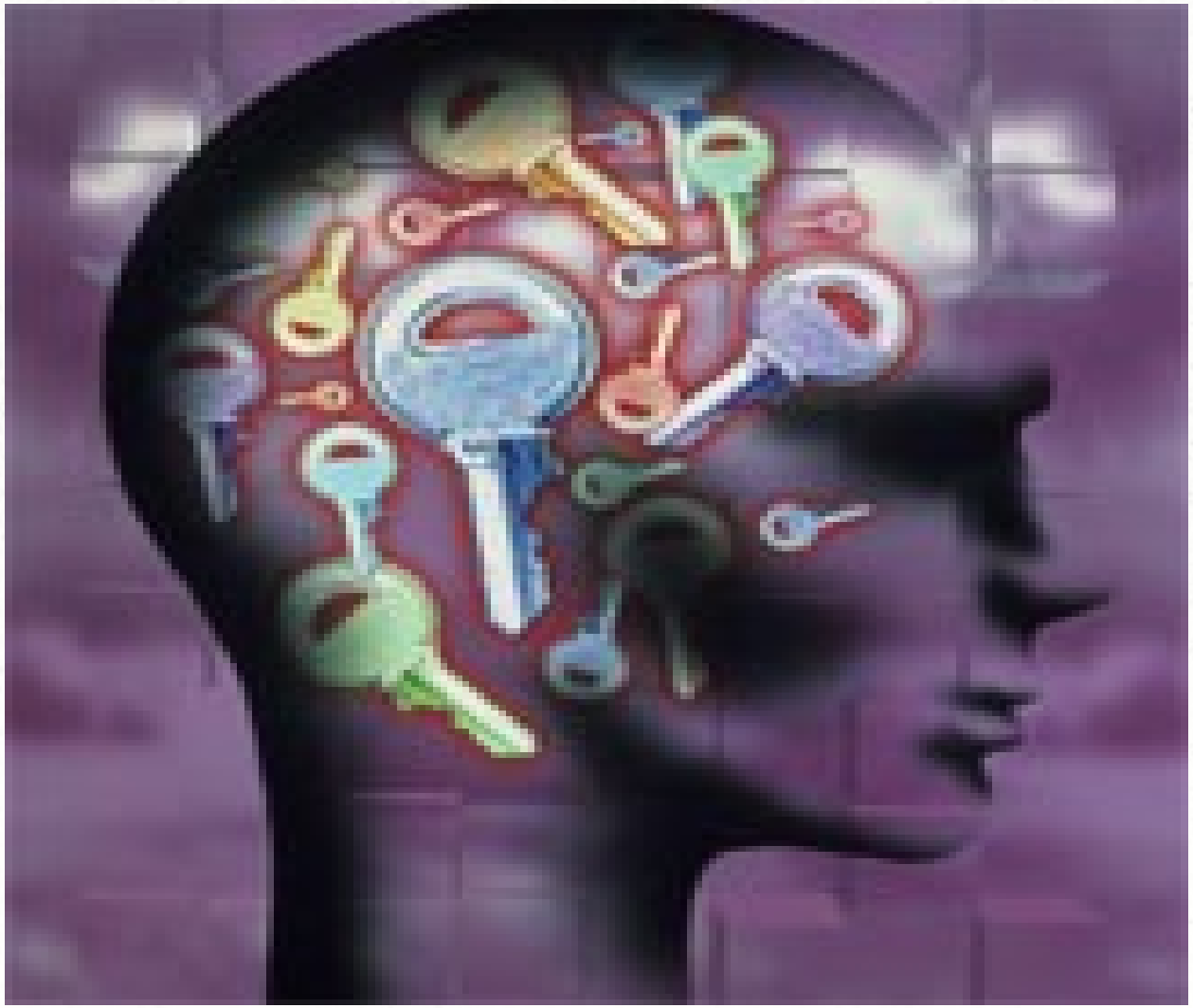
-savings monetarily lets one invest in other educational endeavors

-allow teachers to expose students to a wide range of software products

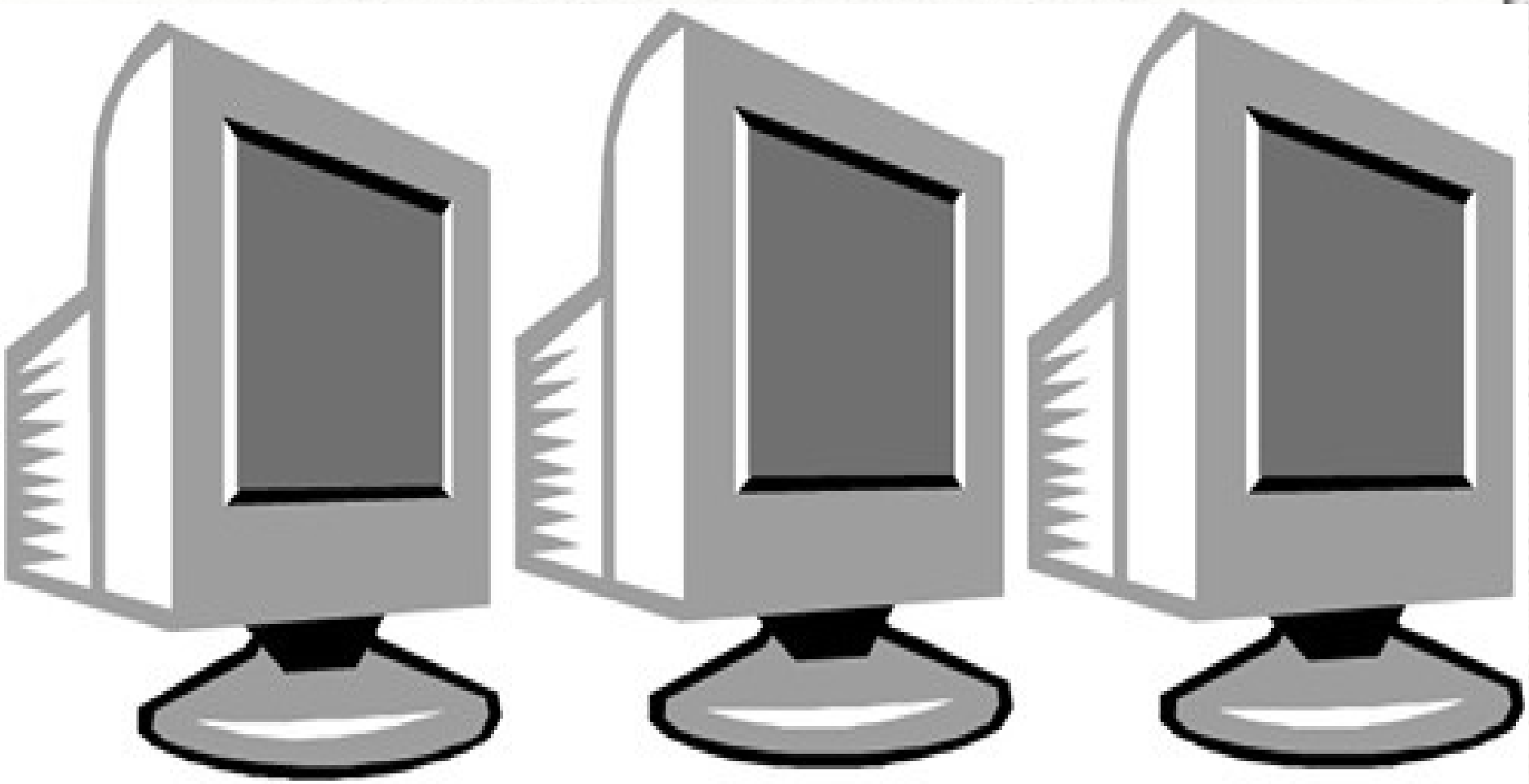
-addresses security issues because its source code is open and available to the users and if any “back-doors” or spy-ware is written into the program the users will be able to use

Open Source Software is compatible with most computer hardware and other applications

Free Open Source Code
The Keys Are Free To All



Open Source Software: Adapted and Used by Older Hardware



Development

-One of the diffusion studies positioned the thoughts on this paper titled “Why Open Source Software / Free Software (OSS/FS, FLOSS, or FOSS)? Look at the Numbers!” By David A. Wheeler and uses quantitative data to give reasons why institutions and individuals may consider using Open Source Software.

A Variety of Software Available for Many Uses.

Quantitative Research

Commercialism

-The commercialism and marketing of the Open Source Software is easy because there is minimal if any charge for the various software download and use.
-In the educational community through sharing information and educational tools has seen the use of this software more wide spread.

Used by the business community:

Used by the many of the educational community from primary to post-secondary educational users.

Open Source can be utilized by many learners around the world.

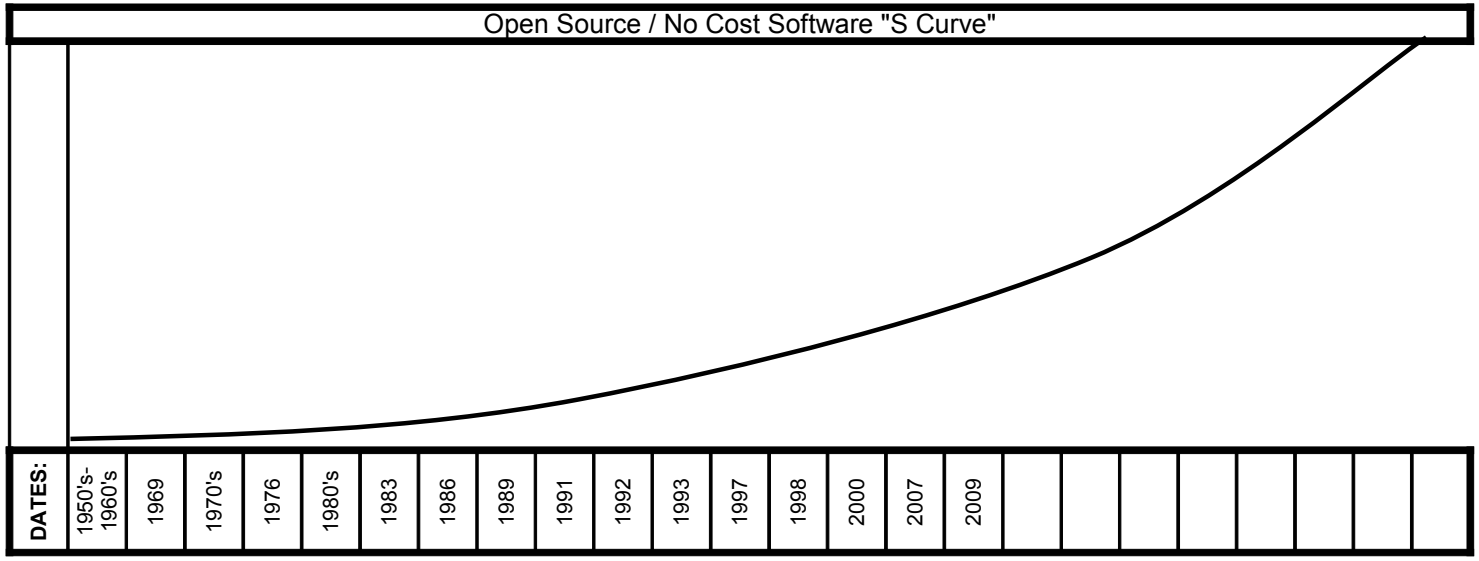
Huli Wigmen of Papua, New Guinea using laptop computers.

References:

Lakhan,S. E., Jhunjhunwala,K.: Open Source Software in Education 2008,EDUCAUSE Quarterly, vol. 31, no 2 Clipart retrieved from; http://www.educause.edu/EDUCAUSE+Quarterly/EDUCAUSEQuarterlyMagazineVolum/OpenSourceSoftwareinEducation/162873 on 6/25/09.

Clipart retrieved from ***www.tcpd.org*** *on 7/1/09.*

S Curve


Open Source / No Cost Software "S Curve"
DATES:
1950's-1960's
1969
1970's
1976
1980's
1983
1986
1989
1991
1992
1993
1997
1998
2000
2007
2009

"S Curve" Timeline for Open Source / No Cost Software	
1950's-1960's	Produced by academics & corporate researchers working in collaboration and was not seen as a commodity
	Distributed and maintained by the community of users
	Source Code was distributed with software to enable users to modify, debug or add functionality
	IBM 701 Share Digital Equipment Corp. called
1969	USA vs. IBM Anti-trust suit - bundled software anti-competition - some software with cost on the rise
1970's	AT&T distributed early version of UNIX to government & academic researchers at no cost but no distribution rights
1976	Bill Gates wrote "Open Letter to Lobbyist" Message is that hackers sharing was in fact stealing
1980's	Develop USENET - connected the programming community to share & contribute to software others had written
1983	Richard Stallman GNU Project wrote complete operating system from constraints of its source code
	Richard Stallman coined the term "free software" and founded the Free Software Foundation
	Recursive Acronym GNU
1986	Definition of Free Software published
1989	Recursive Acronym "CYGNUS" your GNU support
	GPL General Public License more widely used free software license
1991	GPL updated
	LINUX Freely modifable source code; license not free
1992	LINUX relicensed under GPL free license
1993	GNU LINUX release - commitment to free software
	Free BSD, Berkeley Software Distribution
1997	Debram Free Software Guidelines
	Eric Raymond published "The Cathedral and the Bazaar" analysis of hacker community and free software
1998	Netscape Communication internet suite - free software for web browsers - now Mozilla, Foxfire, and Thunderbird
	Open Source initiative founded
	OT Toolkit Grap user interface images
2000	
2007	
2009	